

REMARKS

Claims 10-19 are all the claims pending in the application. Claims 13, 15, and 19 are withdrawn from consideration for being directed to a non-elected invention. By this Amendment, Applicant editorially amends claims 10-12, 14, and 16-18 for improved conformity with the US practice. No new matter is being added. The amendments to the claims were made for reasons of precision of language and consistency, and do not narrow the literal scope of the claims and thus do not implicate an estoppel in the application of the doctrine of equivalents. The amendments should be entered at least because they simplify the issues for appeal by fixing minor informalities *i.e.*, antecedent basis.

I. Preliminary Matter - Restriction Requirement

As a preliminary matter, claims 13, 15, and 19 are withdrawn from the consideration. The Restriction Requirement is maintained and made final because allegedly the Examiner only examined the claims under 35 U.S.C. § 101 and § 112 grounds.

Applicant respectfully notes that the claims are not so indefinite as to not be examined on their merits. Accordingly, the Examiner should have fully examined the claims in the previous Office Action.

Furthermore, Applicant respectfully notes that the Examiner's Restriction Requirement is based on the alleged lack of unity in the PCT application. However, the International Search Report relates to claims 1-9 and not claims 10-19. Accordingly, the Examiner's comment regarding alleged lack of unity of invention in the PCT application is without merit.

Applicant respectfully reserves the right to petition this Restriction Requirement.

II. Summary of the Office Action and Failure to Examine the Claims on Their Merits

Claims 10-12, 14, and 16-18 presently stand rejected under 35 U.S.C. § 112, first paragraph and under 35 U.S.C. § 112, second paragraph.

Applicant respectfully notes that even when the Examiner issues 35 U.S.C. § 112, first paragraph rejections, the claims must be examined over prior art.

As detailed below, the 35 U.S.C. § 112, second paragraph rejections mainly relate to antecedent basis issues. Where the degree of uncertainty is not great (such as antecedent basis issues), and where the claim is subject to more than one interpretation and at least one interpretation would render the claim unpatentable over the prior art, an appropriate course of action would be for the Examiner to enter two rejections: (A) a rejection based on indefiniteness under 35 U.S.C. § 112, second paragraph; and (B) a rejection over the prior art based on the interpretation of the claims which renders the prior art applicable. See, e.g., *Ex parte Ionescu*, 222 USPQ 537 (Bd. App. 1984). This approach is recommended from an examination standpoint because it avoids piecemeal examination in the event that the Examiner's 35 U.S.C. § 112, second paragraph rejection is not affirmed, and may give applicant a better appreciation for relevant prior art if the claims are redrafted to avoid the 35 U.S.C. § 112, second paragraph rejection, MPEP § 2173.06.

III. Claim Rejections under 35 U.S.C. § 112, first paragraph

Claims 10-12, 14, and 16-18 are rejected under 35 U.S.C. § 112, first paragraph.

Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

Written Description Issues

The Examiner alleges that the phrase “*a non-turning area in which machining other than the turning is performed after the turning*” set forth in claims 10-12, 14, and 16-18 is not supported by the original specification (*see* page 3 of the Office Action). Applicant respectfully disagrees.

While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure, MPEP § 2163. In an exemplary embodiment, it is disclosed that a process expansion processor executes processing for breaking down a series of machining operations including turning, point machining, surface machining, and chamfering, referred to as machining modes, into machining units in which continuous machining is performed with the same main spindle and the same tool (§ 82 of the specification). Similarly, it is disclosed that machining operations include turning, point machining, surface machining, chamfering and the like (§ 207 of the specification). Accordingly, one of ordinary skill in the art would readily understand that a non-turning area is an area in which machining other than turning is performed *e.g.*, point machining, surface machining, chamfering and the like, as described in the specification.

In view of the foregoing, Applicant respectfully submits that the term “non-turning area” as set forth in claims 10-12, 14, and 16-18 is clearly supported by the specification.

The Examiner further alleges that there is no support for the *determining operations executed in the first process*, as recited in claims 10, 14, and 16 (*see* page 4 of the Office Action). Applicant respectfully disagrees.

In an exemplary, non-limiting embodiment, it is disclosed that a dividing spot is determined and based on this dividing spot, the outer diameter side is divided into the first

process and the second process at a process dividing position 65 and the inner diameter side is divided into the first process and the second process at the process dividing position 66. In an exemplary embodiment, a milling position 67 located on the first process side belongs to the first process, and a milling position 69 located on the second process side belongs to the second process. The process division processor 14 determines the machining content such that at a milling position 68 in which the process dividing position 65 is present, the whole portion including the one belonging to the first process side is machined in the second process. This is because it is more efficient to perform milling after chipping the whole outer diameter, than performing milling in a state that the outer diameter is chipped to half (Figs. 39 and 40; ¶ 189 of the specification).

An exemplary embodiment further discloses that when the automatic determination mode is selected at step S190, the process division processor 14 executes the following processing. The process dividing position is determined (step S196). A region on the edge side from the determined dividing position is determined as a first process region to be machined in the first process, and a region on the base side (chuck side) from the dividing position is determined as a second process region to be machined in the second process (Fig. 38; ¶ 190 of the specification).

In other words, in an exemplary embodiment of the present invention, it is disclosed that the regions for the first process and the regions for the second process are determined based on the dividing position. Accordingly, one of ordinary skill in the art would readily understand that the regions are determined based on the obtained process-dividing positions, as described in the specification.

In view of the foregoing, Applicant respectfully submits that determining operations of the first process as set forth in claims 10, 14, and 16 are clearly supported by the specification.

The Examiner further alleges that there is no support for the *determining operation executed in the second process*, as recited in claims 10, 14, and 16 (*see* page 3 of the Office Action). Specifically, the Examiner alleges that “determining the non-turning area as the second process region in such a manner that the non-turning machining area belongs to the second process region, if the determined process-dividing position on the inner diameter machining side or the process-dividing position on the outer diameter machining side is within the non-turning area” is not supported by the specification. Applicant respectfully disagrees.

An exemplary embodiment of the present invention, discussed in detail above, discloses that the processor determines the machining content such that at a milling position 68 (non-turning area) in which the process dividing position 65 is present, the whole portion including the one belonging to the first process side is machined in the second process (§ 189 of the specification).

In other words, in an exemplary embodiment of the present invention, it is disclosed that the non-turning area is determined to belong to the second process region if the dividing position is within the non-turning area. Accordingly, one of ordinary skill in the art would readily understand that a determining operation is performed determining the non-turning area as the second process region in such a manner that the non-turning machining area belongs to the second process region, if the determined process-dividing position on the inner diameter machining side or the process-dividing position on the outer diameter machining side is within the non-turning area, as described in the specification.

In view of the foregoing, Applicant respectfully submits that determining operations of the second process as set forth in claims 10, 14, and 16 is clearly supported by the specification.

Enablement Issue

The Examiner further alleges that the phrase “*a non-turning area in which machining other than the turning is performed after the turning*,” set forth in claims 10-12, 14, and 16-18, is not enabled (*see* page 4 of the Office Action). Applicant respectfully disagrees.

Applicant respectfully notes that during examination the USPTO must give claims their broadest reasonable interpretation in light of the specification, MPEP § 2111.01.

As explained in an exemplary embodiment of the present invention, machining operations include turning, point machining, surface machining, chamfering and the like (§ 207 of the specification). Accordingly, one of ordinary skill in the art would readily understand that non-turning area is an area in which machining other than the turning is performed *e.g.*, point machining, surface machining, chamfering and the like, as described in the specification.

In view of the foregoing, Applicant respectfully submits that the term “non-turning area” as claims 10-12, 14, and 16-18 is clearly enabled by the specification.

Accordingly, Applicant respectfully requests the Examiner to withdraw these grounds of rejection.

IV. Claim Rejections under 35 U.S.C. § 112, second paragraph

Claims 10-12, 14, and 16-18 are rejected under 35 U.S.C. § 112, second paragraph.

Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

The Examiner alleges that the *determining operation executed in the second process*, as recited in claims 10, 14, and 16 is indefinite because it is unclear what the alternative result to the above condition not being true is (*see* pages 5-6 of the Office Action). Applicant respectfully

submits that the alternative result is not recited in the claim, as such the Examiner's rejection is not understood and is legally inaccurate.

For example, claim 10 recites that "determining the non-turning area as the second process region in such a manner that the non-turning machining area belongs to the second process region, if the determined process-dividing position on the inner diameter machining side or the process-dividing position on the outer diameter machining side is within the non-turning area." It is respectfully noted that there may be other conditions that will classify the non-turning area into a second process region. Also, there may be other conditions that would classify the non-turning area into a first process region. However, these conditions are not being claimed and are irrelevant to the claimed invention. In other words, the Examiner cannot and should not assume anything about an alternative result from the above condition. Applicant respectfully notes that the claim does not recite an "if" "else" statement but simply has an "if" condition.

Furthermore, Applicant respectfully notes that in an exemplary, non-limiting embodiment, when the non-turning area is located on the first process side, it belongs to the first process and when it is located on the second side, it belong to the second process and that when it is in the middle (includes the dividing point), it belongs to the second process (§§ 188-190). It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the allegedly unclear features of the claims mentioned above.

In view of the foregoing, Applicant respectfully submits that the determining operation of the second process as set forth in claims 10-12, 14, and 16-18 is definite.

The Examiner further alleges that since the determining in the second process is conditional, there is no *antecedent basis* for creating the program based on the *determining in the second process* (see page 7 of the Office Action). Applicant respectfully thanks the Examiner for pointing out, with particularity, the aspects of the claim thought to be indefinite. Applicant respectfully requests the Examiner to withdraw this rejection in view of the self-explanatory claim amendments being made herein.

The Examiner further alleges that there is no *antecedent basis* for “*machining*” because different types of the machining operations are performed in the first and second process region (see page 7 of the Office Action). Applicant respectfully disagrees and traverses this rejection as follows. As acknowledged by the Examiner, different types of machining operations are still machining. The preamble of claims 10, 14, and 16 does not recite one type of machining or another. Accordingly, it is clear and definite that in both processes some type of machining is performed. That is, the machining is performed in the first and second processes. Therefore, the antecedent basis is proper.

The Examiner further alleges that there is no *antecedent basis* for the *whole machining area* set forth in claim 10 and “*the calculating*” set forth in claim 11 (see page 7 of the Office Action). Applicant respectfully thanks the Examiner for pointing out, with particularity, the aspects of the claim thought to be indefinite. Applicant respectfully requests the Examiner to withdraw this rejection in view of the self-explanatory claim amendments being made herein.


In view of the foregoing, Applicant respectfully requests the Examiner to withdraw these grounds of rejection.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. **If any points remain in issue, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below to schedule an Interview.**

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Nataliya Dvorson
Registration No. 56,616

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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